S A N A T A N

Pratnakirttimapavrinu
(Let us attempt to unravel the glorious past – *Rigveda*)

Editor
Dr Alok Tripathi

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Sarnath : Mauryan Lion Capital (source : ASI)

South **A**sian **N**etwork of **A**rcheologists/academicians for **T**echnical and **A**rtistic **N**urturing

"Awake, arise and stop not till the goal is achieved."
- Vivekananda

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EDITORIAL

Dear Colleagues

*A year back, on 8th August (08.08.08), an idea to create a forum where all those who love their heritage can exchange news and views in the field of art, archaeology and related disciplines was resulted in the humble beginning of Sanatan (**S**outh **A**sian **N**etwork of **A**rcheologists/academicians for **T**echnical and **A**rtistic **N**urturing). The first issue having two pages was circulated to about 60 professionals in India. Till the end of the year its circulation was restricted within the country but soon the seed saw in the month of shrawan grew in a large tree and now more than 1200 around the world share Sanatan.*

In last one year its frequency has changed and for some time it could also not come out in time due to our constraints. But despite all short-comings it has served the objectives with which it was started. It has generated debates on some of the vital issues, which is not otherwise possible on any other academic forum. It has spread information about various activities and above all it has motivated some of the prestigious institutions to bring out their bulletins and newsletters. We are in the age of speed and information and any such tool empower knowledge seekers and those who wish to excel in their fields. These activities will create awareness, and ensure flow of information which is the need of the hour. But this all is not enough much more is to be done in coming years and collectively we will do it.

Editor

RESEARCHES

Exploration in and around Loktak Lake

Since the beginning of underwater archaeology in India most of the works were carried out in the sea and coastal areas. Since ancient times, water banks have been places of habitat, and most of the habitational remains are found near the areas where once existed a water body. The internal waters of India hold great potential for underwater archaeology. A variety of water bodies are spread through the length and breadth of the country. In order to explore inland water bodies Underwater Archaeology Wing undertook exploration in and around Loktak lake. It is therefore, not only the first underwater excavation in inland waters but also the first underwater investigation at high altitude.



Loktak lake: Satellite image (Courtesy: Google)

Manipur has 22,356 sq. km. area of which nine-tenth is hilly areas and around 1843 sq. km. is confined to valley. About two-third population of Manipur is concentrated to the one-tenth valley areas and the rest one-third is spread in the vast tracts of hilly areas. Human settlements have been around Loktak lake since antiquity. The Underwater Archaeology Wing conducted exploration in and around the Loktak lake from 20th May to 31st May 2009.

Objectives

The objective of the exploration was two pronged. One was to find out the evidences of old settlements in the lake. Dwellings on floating islands in the lake is known to be quite an old tradition. These dwellings were made of organic materials which get deteriorate very fast and it is very difficult to find their remains on land. But at the same time these organic materials get preserved when buried underwater. The remains of ancient dwellings in the lake can only be found through underwater archaeological investigations. The islands in the lake also need to be explored for the purpose of tracing the remains of ancient societies dependent on the lake. Another objective of the exploration was to study ancient sites around the lake to study the changes in the lake and its impact on communities around the lake. It may be pertinent to mention that the Neolithic culture of the northeastern India has remained understudied.

Location

Loktak lake, (24°33' N., 93°47' E.) is famous for being the largest fresh water lake in Northeast India. *Lok* here stands for 'stream' and *tak* for 'the end'. This lake covers a total area of 236.21 sq. km., and its maximum measured depth is 4.6 m. The lake falls under Bishnupur, Imphal and Thoubal districts. It is about 48 km. south of Imphal and accessible by road.



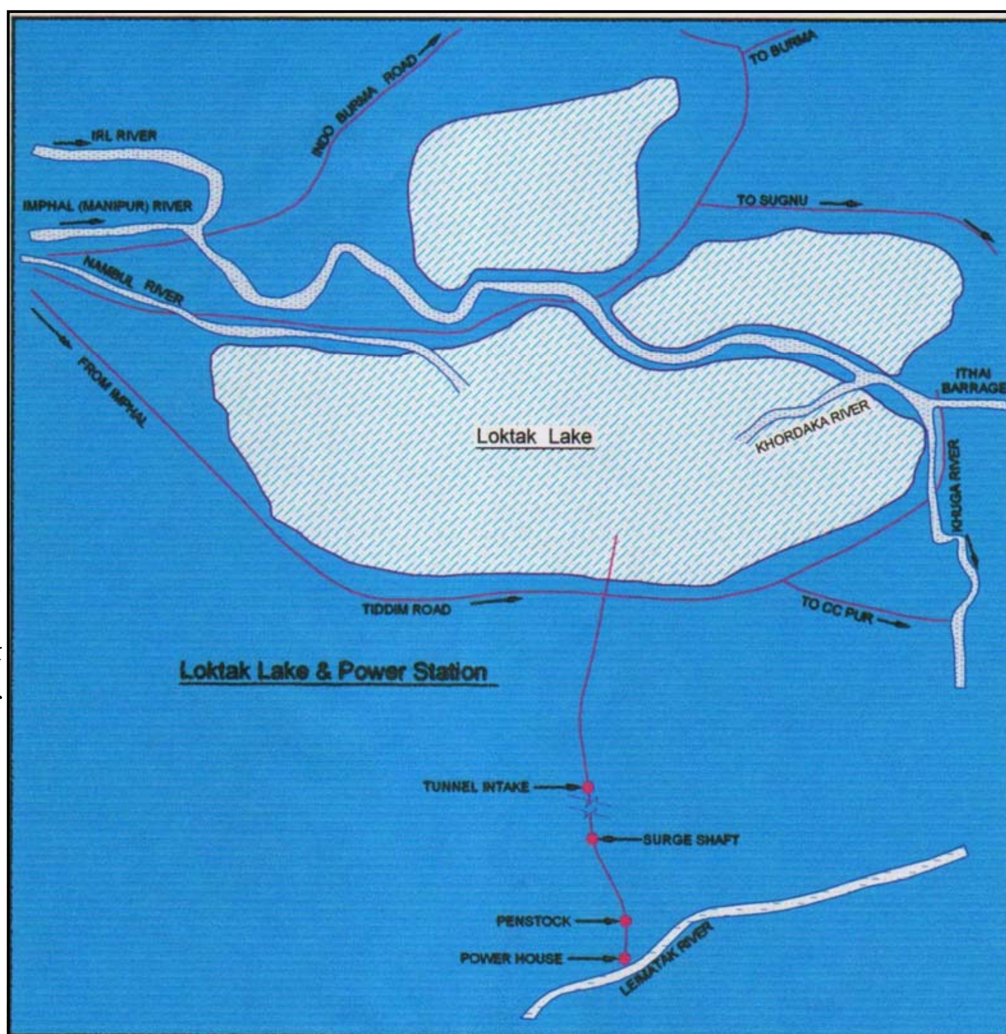
Loktak lake : Artificially created *phumdis* for fishing

Almost two-thirds of this enormous expanse of freshwater is covered with unique floating islands of reed and humus, i.e. *Phumdis* or *phumshongs*. These floating islands are actually a heterogeneous mass of vegetation, soil, and organic matter at various stages of decomposition. The lake is a significant source of livelihood and of locals who reside in the surrounding areas and on *Phumdis*.

Geography

Geographically the lake can be divided into three zones, i.e. the Northern, Central and Southern zones.

The Northern Zone, extends from the eastern side of River Nambol (near Ngaikhong Khunou) to Phabakchao including Maibam Phumlak. This area has five main rivers, i.e. Nambol, Merakhong, Ishok, Waishel and Nambul, merging into the lake. Large *phumdis* (thickness varying between – 0.4 - 4.5 m) separate this zone from the Central Zone, which stretches from the northwest to the south-east.



Loktak lake: Rivers merging into the lake

The Central Zone extends from *Awang Laisoi Pat* (western side of River Nambol near Ngaikhong Khunou to Laphu Pat (between Khordak

channel and River Imphal) which encloses prominent islands of Thanga, Karong and Ithing. It is the main open water zone of the lake, which, incidentally, was relatively free from *phumdis* in the past, but over the years '*athaphums*' (artificially created *phumdis* for fishing) created by villagers for fishing have proliferated resulting in choking the entire lake.

The Southern zone encompasses the Keibul Lamjao National Park, Ungamel and Kumbi *pats* at the southern part of the lake, and the zone is linked with River Khuga by the Ungamel channel. River Imphal here is also linked with this zone by the Khordak channel. The western catchment drained by the River Kangshoibi flows into this zone.

Exploration in the Lake

Area around the Loktak lake has been utilized for living since antiquity. The most interesting are the huts made by the local folk on floating islands of *Phumdis*. There are around 14 hills of varying sizes and elevation around



Loktak Lake: Exploring on traditional canoe

the lake, but not all of them are inhabited. The team thus explored some islands in the lake and hill slops and river valleys around the lake, and also visited some ancient monuments and archaeological sites in districts of Imphal and Bishnupur.

As per the plan for the exploration, the team visited/ explored following areas:

The area in the Kangla fort, which includes some monuments and a site near the now dried-up Imphal River (Manipur River) where excavation was carried out done by the Department of Archaeology, Manipur State.

Ningthoukhong, near Moirang in the district of Bishnupur, where a cannal goes to Loktak Hydro Electric Power Project.

Islands namely Karong and Thanga in the Loktak lake. These are the two most densely populated islands among the 14 islands in the lake.

Neolithic sites Napachik and Salangthel located on the periphery of the Loktak lake.

The area on the northern part of the district Bishnupur i.e. in village Bishenpur. The selected area was a dried up channel of a river flowing down from the hill on the opposite side. The area was explored to find remains of ancient habitation, particularly Neolithic sites.

The area around the Vishu temple in district Bishnupur. This temple is a protected monument under the Archaeological Survey of India.

Locality of Phubala in district Bishnupur, to document a dugout canoe used by the people in the area.

Temples of tribal deities and museum in Moirang.

Previous Studies

There has not been much work on the archaeology of Manipur. Some of the excavations conducted by the Department of Archaeology, Manipur State and Manipur University were of small scale excavations and no detailed reports are published. Excavated material from some of the excavations is housed in Department of Archaeology, Manipur State and Museum of Manipur University.

In order to get first hand information about the archaeological remains found in the region, the team interacted with officials of Department of Archaeology, Manipur University and other amateur archaeologists, which helped greatly in obtaining useful information about archaeological sites and remains in nearby areas and especially Loktak lake.

Among these mention of Prof. Kunjeswori Devi, Manipur University; Dr. S. Bhijgaya Singh, Superintendent of Archaeology, Department of Archaeology, Manipur State; Dr. Suresh, Chairman, Himalayan Cultural Research Centre; and Sh. Nanjest Thongbam, Lecturer, Manipur College may be made.



UAW team with archaeologists and historians from Manipur University, Department of Archaeology, Manipur State; Manipur College and Himalayan Cultural Research Centre

Exploration in the Lake

Though the UAW has access to modern equipments and all necessary modern technology but to understand the life of local people and ancient societies it is necessary to use and understand the mechanics of traditional methods. All those living in and around the lake are depend on the dugout canoes which are the lifeline for travel, communication and sustenance.

To understand the navigability of locally made dugout canoes the team explored the Loktak lake along with some local folks of the Karong Island. Three canoes were used to explore western part of the Central Zone of lake. The exploration started from Ningthoukhong and ended at Karong. On the way the team visited and documented huts on floating islands in this part of the lake. Growth of different varieties of vegetation and weeds is extensive in the lake. These vegetations growing in the water were also documented.



Loktak lake: Huts on floating island

After long journey through floating islands the team landed on Karong Island. The area and habitation around the island was also explored. Traditional knowledge about these floating huts, lake, local legends, any recent finds, etc. was obtained from elder persons in the locality.



Loktak lake: Huts on floating island

Ningthoukhong

The team also explored Ningthoukhong (*Ningthou* means king and *khong* means canal) area. The canal supply water to Loktak Hydro Electric Power Project. To arrest floating vegetation five traditional bamboo nets are installed here. The exposed portions of these barriers get decay faster than the portion underwater which survive longer. These barriers made of bamboo are installed from one bank to the other in a semi-circular manner. Bamboos are tied up in a criss-cross pattern at proper distances, with the horizontal bamboos for support. It makes the barrier stronger. The approximate distance between one bamboo net to another is about 21 m.



Ningthoukhong : Barriers to arrest floating weeds



Ningthoukhong : Remains of an old barriers to arrest floating weeds

Thanga Island

To the west of the lake is a hill called Thanga. It is the highest point in the Loktak area and offers a panoramic view of the lake all around. It is presently under the control of the security forces which use it as a watch point to keep an eye on the activities in the lake area. With the permission of the security forces the team climbed to the top of the hill. The panoramic view of the islands, various zones of the lake and density of floating vegetation makes one to understand the dynamics of wind and current and its impact on the activities in the lake. Southern Zone is thickly covered with *phumdis* where as Northern Zone is comparatively free from floating vegetation. It also helps to understand formation and spread of artificial islands for fishing. The area around the Loktak lake was photo documented from the highest point.



Loktak lake : View from the top of hillock at Thanga Island

Karong Island

To the east of Thanga are located some islands in the lake. Among these biggest is Karong Island. Karong is a small hillock in the lake, having dense habitation on its slops. About 400 families, living in the island depend largely on the lake. The team traveled to Karong Island in a motorboat from the Thanga Island.

The hillock, habitation area and surrounding floating weeds were explored. The island has a temple dedicated to *Ibudhou Khumanpokpa*, a local deity of the village. It is simple in construction and made of wood and bamboo devoid of any notable architectural feature. The island is surrounded by floating huts made of wood, bamboo and weeds locally known as *Kambong*.

During the discussions, elders in the island informed about findings of Neolithic tools on the top of the hill. These tools were discovered a few years back when lightening struck the hilltop. The exact location where the tools were discovered remains unknown and even the evidences are not traceable now. Many such important findings made in the past have disappeared without proper study due to lack of awareness about the cultural heritage among the tribal population.



Karong : Island in the lake

Documentation of Canoe at Phubala

Next the team visited Phubala in district Bishnupur to study and document dug out canoes used by the local people of the area. These traditional boats are locally known as *hi*. It has an elongated rectangular shape, having seating capacity of two to four people. The front part is pointed with a hole to tie rope where as at the rear side it has a rectangular wooden projection used by rower to sit. Detailed measurements were taken to draw a scaled drawing. Various parts, features and its navigation was also documented in detail.







Phubala: Documentation of traditional canoe—*Hi*

Vishnu Temple, Bishnupur



Vishu temple at Bishnupur is a 'protected monument'. It is a small structure made of bricks with a *sikhara*. Presently there is no image inside the temple. The temple is conserved recently and has been plastered and painted. The area around the temple was ploughed to lay garden around it which brought many brickbats and pottery on surface. The pottery found around the temple have incised designs like horizontal and vertical lines, triangles, squares, etc. and datable to 17th-18th century.

Conclusions

Once the Loktak lake covered almost entire valley, but its area is shrinking at a steady rate. Siltation, human activities in catchment area, etc. are some of the reasons for falling of water levels. Dried-up and peripheral areas have been inhabited since antiquity. Traces of early habitations are found now and then in the rim areas which are now being utilized for agricultural purposes.

Loktak lake has played a very important role in the development of cultures in Manipur. Even today two-third population of the state lives in valleys. The shores and islands of this lake were inhabited since the prehistoric times and inhabitants were wholly dependant on the water of the lake and its products.

Rich soil on its banks, islands and floating islands were ideal places for the habitation in this hilly terrine. High grasses and weed from the lake provided material to make houses. This area with high grasses and vegetation in and around the lake was rich in game and good for hunting. The lake itself had abundant fish for sustaining population living in and around. Therefore the lake was the lifeline for all those societies located around it.

Over the centuries remains of these activities have gone down and might have preserved on the bottom. It has been seen that the objects underwater

are better preserved in comparison to those exposed above the water line.

However due to vegetation in the lake diving is little difficult and would require cutting of weeds and cleaning of the area before any underwater work could be undertaken. But the remains preserved on the bottom of the lake would be able to throw fresh light on the past societies lived in and around the lake.

Militancy in this region is also a problem in carrying out explorations in the area, as these floating islands with high grasses are the favourite hiding places for militants and are under the scanner of security forces.

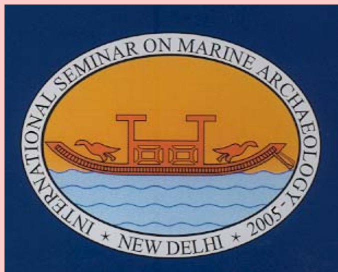
Despite all these difficulties, the area of Loktak lake holds great potential for archaeological studies and to study prehistory of Northeast India.

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Loktak lake: Huts on floating island

International Seminar on Marine Archaeology







ISMA-4

March 2010

Ancient Ports of Indian Ocean and India's Maritime Linkages with the IOR Littorals

Acceptance
30.09.2009

Abstract
30.11.2009

Final Paper
31.01.2010



Organized by
the Indian Navy and
the Archaeological Survey of India

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INTERNATIONAL SEMINAR ON MARINE ARCHAEOLOGY – 2010 (ISMA-4)

Introduction

International Seminar on Marine Archaeology is organized every second year.

The ISMA-1, organized in 2003, focused on the recent discoveries on the West coast of India and maritime activities in the Arabian Sea.

The ISMA-2, organized in 2005, focused on the recent discoveries on the East coast of India and maritime activities in the Bay of Bengal.

The ISMA-3, organized in 2007, focused on the Maritime heritage of Indian Ocean.

Two day Seminars were attended by a number of mariners, archaeologists, historians, navigators, naval officers and host of other scholars and researchers from around the world.

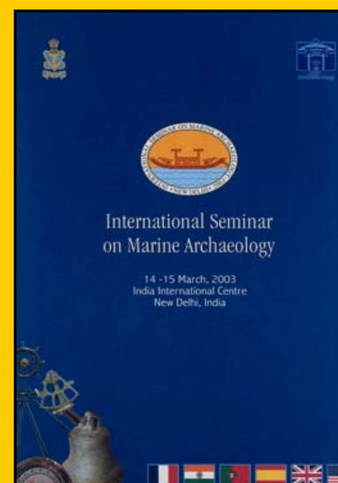
Theme **Ancient Ports of Indian Ocean and India's Maritime Linkages with the IOR Littorals**

Dates **March 2010 (First-half)**

Venue **India International Center, New Delhi**

Time Schedule

Acceptance	30.09.2009
Abstract	30.11.2009
Final Paper	31.01.2010



Objectives

This seminar aims to bring together scholars and professionals to discuss a variety of topics related to maritime archaeology in general and **Ancient Ports of Indian Ocean and India's Maritime Linkages with Indian Ocean Region Littorals** in particular.

Topics relevant to modern development and protection of underwater cultural heritage would also be addressed. ISMA-4 will make an important contribution to recent advances in research and up to date studies on maritime history and maritime heritage in Indian Ocean.

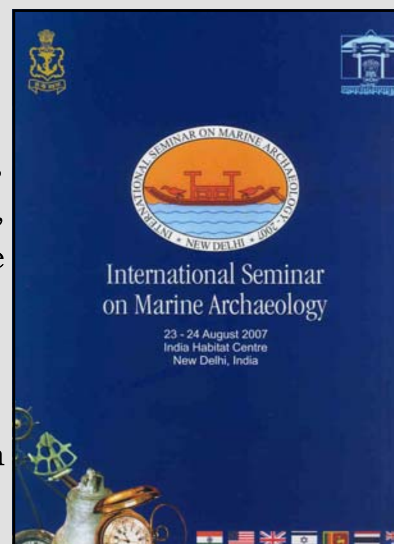
Conference Topics

ISMA-4 focuses on ancient ports, recent discoveries, underwater archaeological activities, new technologies of preservation and maritime heritage of Indian Ocean.

The Seminar will discuss the ancient ports, maritime activities, ancient voyages, marine archaeological finds, historic harbours, and other similar maritime structures in the Indian Ocean. In addition to these the Seminar will also discuss scientific advances in the field of underwater archaeology, traditional boat-building and navigation technology which played a vital role for maritime linkages.

Registration Fee

To promote greater participation of scholars, researchers from various parts of the world, the Organising Committee has decided not to charge any registration fee for the Seminar.



Who Should Attend

Underwater archaeologists, maritime historians, researchers, scholars, naval architects, engineers, administrators and legislators involved with maritime heritage and all those interested in maritime heritage.

Language of the Seminar

All the deliberations during the Seminar will be in English.

Accommodation

Scholars presenting papers would be provided accommodation and local hospitality during the period of seminar.

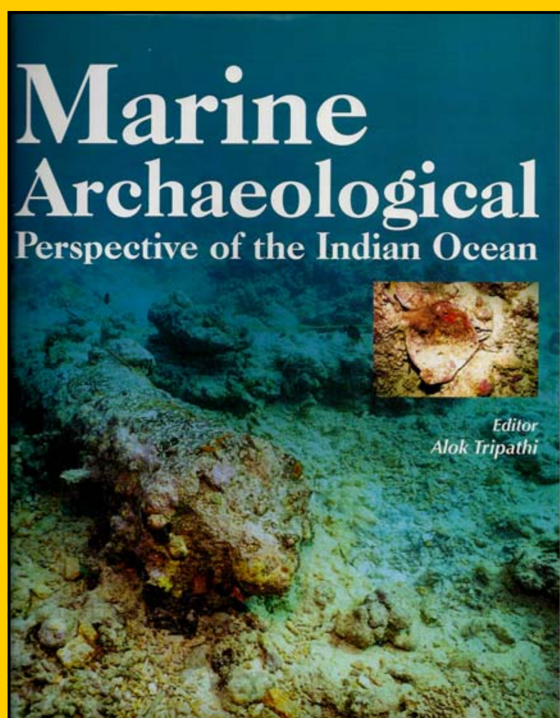
Those who wish to participate, as observers would have to make there own arrangements for stay. The organizing committee may help them in searching and booking suitable accommodation on request.

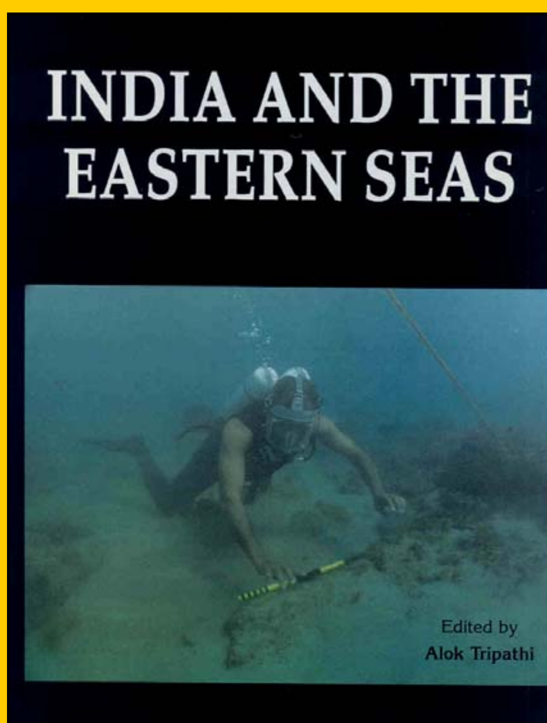
Acceptance

Scholars are requested to send their acceptance at the earliest. Those sending the acceptance by **30.9.2009** will receive subsequent circulars and details of the seminar.



Chief of the Naval Staff, IN and the Director-General, ASI releasing the proceedings of the ISMA-2





Proceedings of the International Seminar on Marine Archaeology

Call for Papers

Papers are invited on the topics outlined and others falling within the scope of the seminar. Abstracts of no more than 300 words should be submitted ***as soon as possible***. We strongly encourage the submission of abstracts electronically.

Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper. Final acceptance will be based on the full-length paper, which if accepted, must be presented at the conference.

Publication of Papers

Proceedings of the ISMA are published in four colours in hardcover volume. Proceedings of the ISMA-1 and ISMA-2, have already been published. The volume has been widely distributed to the participants, important archaeological libraries and other scholars. Proceedings of ISMA-3 will be released during the seminar.

All the papers received for ISMA-4 will be reviewed by members of the Academic Committee and will also be published in a hardcover volume. In addition to being available to delegates, the hardcover volume will be publicised directly to researchers and institutional libraries and distributed widely through the international book trade.

Poster Presentation

Keeping the limited time available for the oral presentation of papers it may not always be possible to include all submissions for oral presentation. Some such works should be allowed for poster presentation during the Seminar.

Contact

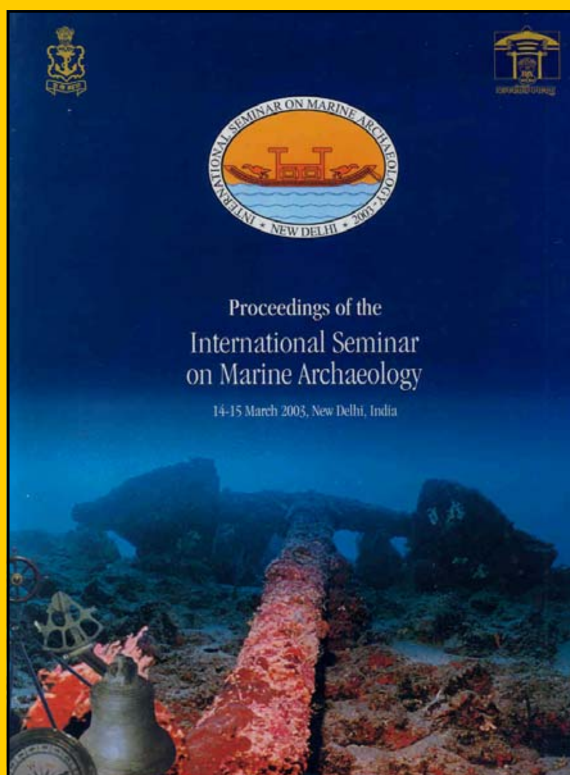
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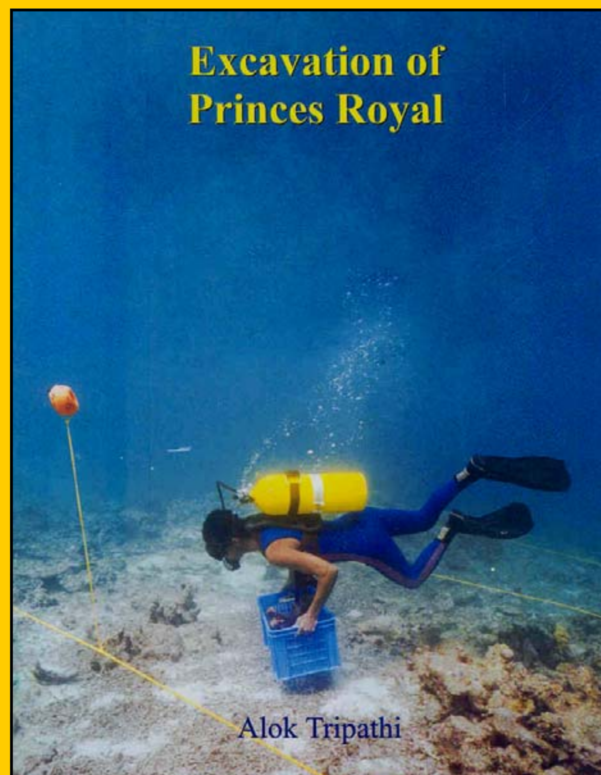
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Excavation of *Princes Royal* : *INS Nireekshak* off Bangaram Island





Some of the publications brought out by the Organising Committee of the International Seminar on Marine Archaeology

OPPORTUNITIES

Assistant Archaeologist in Archaeological Survey of India

The ASI has invited applications for filling up of 54 posts of Assistant Archaeologist on contract basis, Rs.12000/- (fixed).

Candidates not exceeding 30 years and having Master Degree in - Indian History with Ancient Indian History or Medieval Indian History as a subject, or Archaeology, Anthropology with Stone-age Archaeology as a subject, or Geology with Pleistocene Geology as a subject, Sanskrit, or Pali, or Arabic, or Prakrit, or Persian, or Tamil, or Telugu, or Malayalam, or Kannada, or History of Art with Ancient or Medieval Indian History as a subject from a recognized University or equivalent with minimum 55% marks for General category and 50% marks for SC/ST/OBC.

Higher Qualifications in the above mentioned subjects, namely - Junior Research Fellowship, or Senior Research Fellowship, or M. Phil, or Ph.D. from a recognized University or equivalent; Post Graduate Diploma in Archaeology from Institute of Archaeology of Archaeological Survey of India, or Museology; 1 year field experience in archaeology, are desirable.

Reservation for SC/ST/OBC and physically handicapped candidates, and relaxation in age will be as per Government of India's Rule.

The recruitment will be on contract basis for 11 months or till posts are filled up with regular recruitment, whichever is earlier. No other allowances will be admissible. The persons appointed on contract basis will be liable to serve anywhere in India.

Short-listed candidates would be called for interview to be held during last week of August 2009 at New Delhi. All applicants must furnish their E-mail and contact telephone number for expeditious communication.

Candidates, who fulfill the eligibility criteria, may submit their applications on plain paper with their photo, Curriculum Vitae and copies of testimonials to the Joint Director (Accounts), Archaeological Survey of India, Janpath, New Delhi-110011, **latest by 21.08.2009**. For details please visit www.asi.nic.in .

Notes for Contributors

Sanatan has become one of the fastest medium to share information on recent researches and expert views with a large number of professionals in related fields. Time to time we have informed our members about the contributions to *Sanatan*. With every issue our members are increasing and we keep getting communications in this regard.

Sanatan is an OPEN ACADEMIC FORUM where one can share any news or views which one feels would be of use to people in the field or researchers in allied subjects. You may send information on diverse subjects and in various formats. They may include —

Research articles

Reinterpretations

Comments on vital issues

News of general interest

Reports on academic events

Short notes on recent discoveries

Important publications

Views and photographs

Information on seminar and conferences

Invitation for contributing papers, etc.

It attempts to have frequent exchange of information among all those working in related fields for their benefit and in turn for the development of disciplines. All the members are therefore requested to keep sending their contributions for inclusion in bulletin and the annual issue.

Send your views, information to sanatan08082008@gmail.com for sharing.